

ICT Policy in Japan - Broadband and Mobile -

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Hiroyuki HISHINUMA

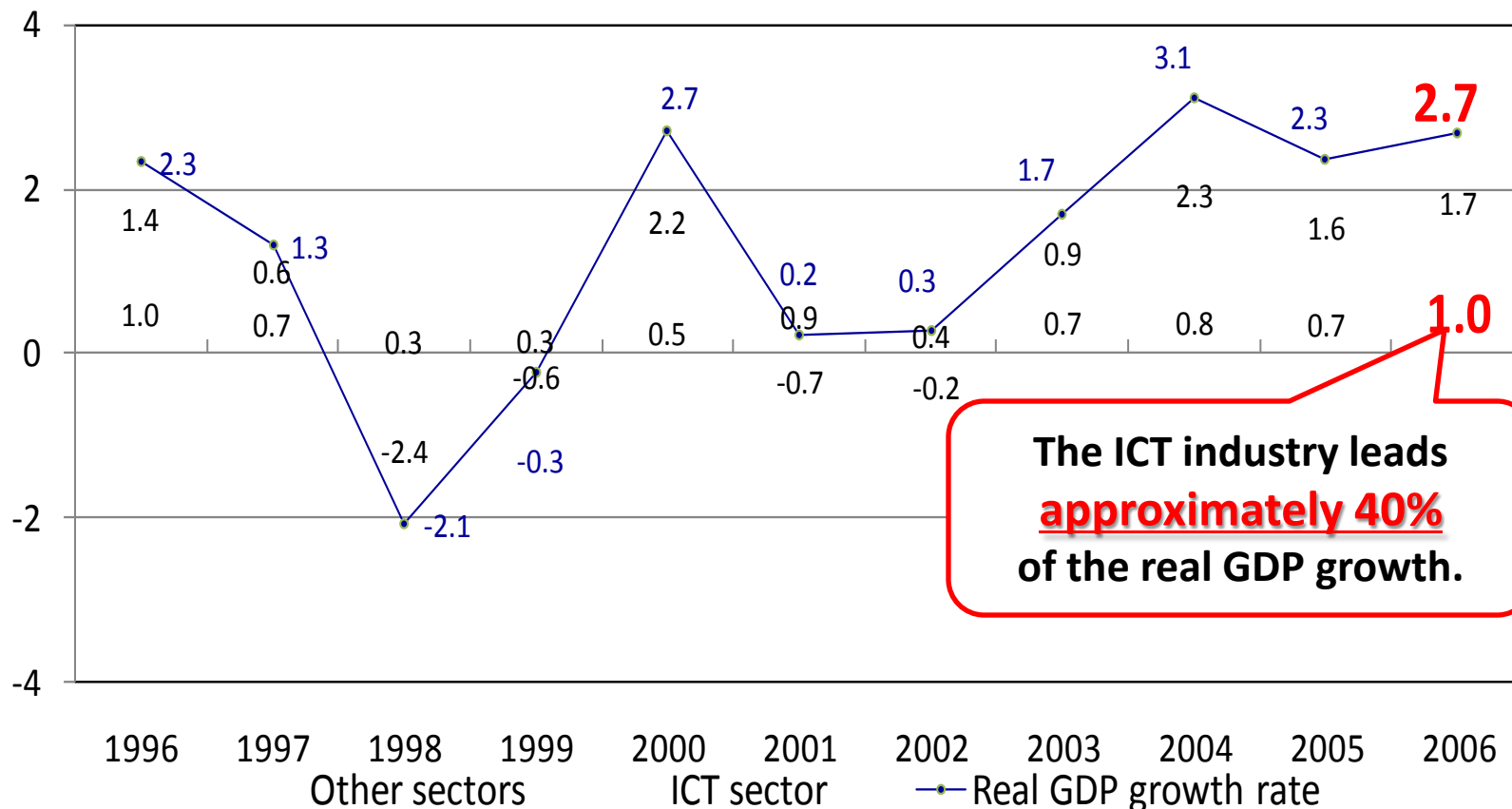
Director for New Competition Policy
Telecommunications Policy Division
Telecommunications Business Department
Telecommunications Bureau
Ministry of Internal Affairs and Communications (MIC)
Japan

ICT Economic Growth (40% Contribution)

The contribution rate of the ICT industry in relation to the fluctuation of real GDP is very high.

■ (%)

ICT Sector's Contribution to Real GDP Growth



The ICT industry leads approximately 40% of the real GDP growth.

(Source) 2008 White paper, Information and Communications in Japan

→ ICT policy is important especially in such a situation as the current economic crisis. Broadband is the vital infrastructure for ICT activities.

Broadband Services

Progress Status of Broadband Deployment

(Unit: 10K contracts)

1,600

1,400

1,200

1,000

800

600

400

200

0

Population: approx. 128 million (Census in Oct. 2008)
Households: approx. 50 million (Census in 2005)
IP Telephones: approx. 19 million (Sept. 2008)

Optical Fibers (FTTH)

○ Number of contracts: 14.42 million
 ○ Number of carriers: 170

14.42 mil

DSL

○ Number of contracts: 11.59 million
 ○ Number of carriers: 48

11.59 mil

FTTH
overtakes
DSL
(June '08)

Cable Internet

○ Number of contracts: 4.08 million
 ○ Number of carriers: 381

4.08 mil

Wireless (FWA)

○ Number of contracts: 0.01 million
 ○ Number of carriers: 30

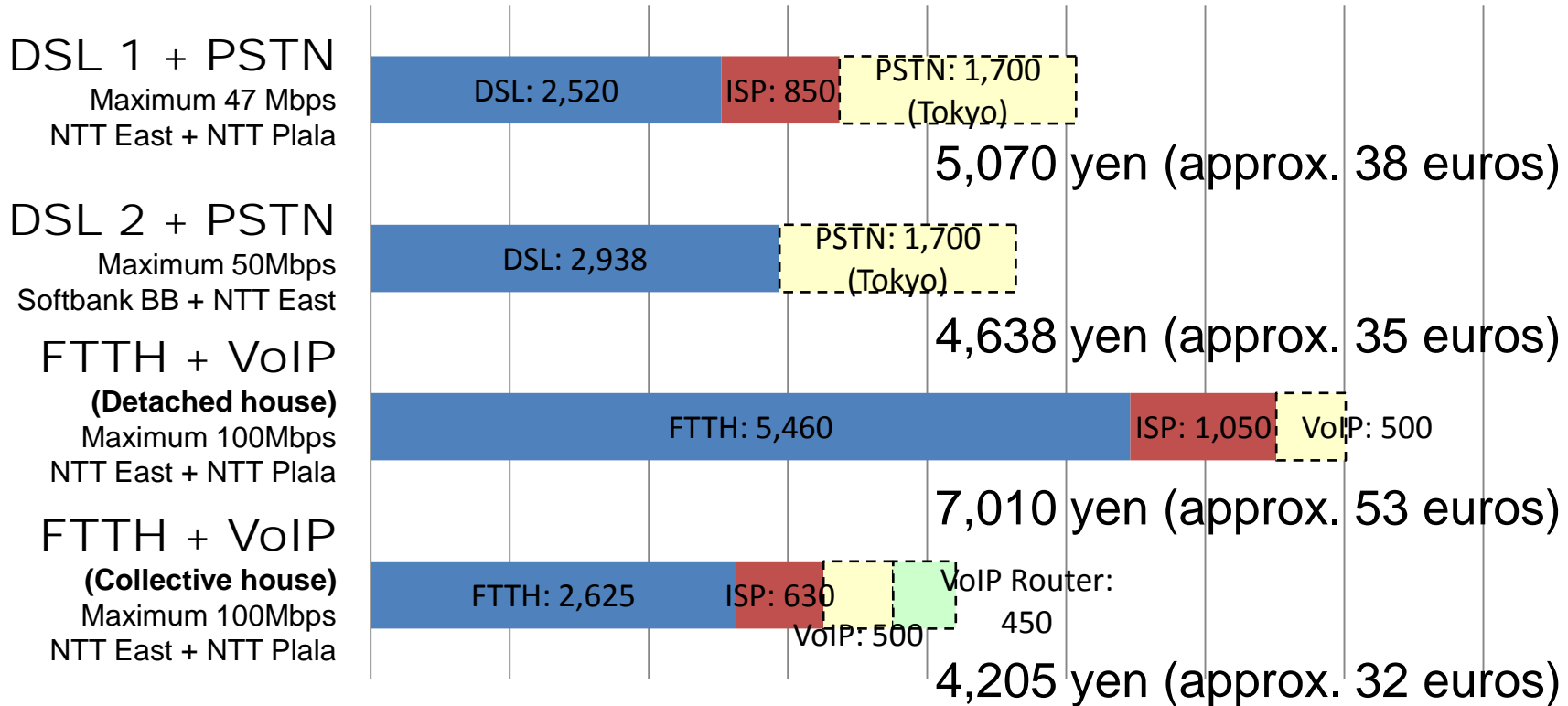
0.01 mil

Note: Reported numbers compiled by MIC in accordance with the provisions of the Rules for Reporting on Telecommunications Business.
 (Numbers compiled before the end of March 2004 were reported voluntarily by carriers)

Why has FTTH grown in popularity in Japan?

1. Competition Policy
2. Demand for faster broadband
3. Continuous investment by NTT
4. National target
5. Government support
6. Geographical features of Japan, etc.

User Charge for ADSL and FTTx



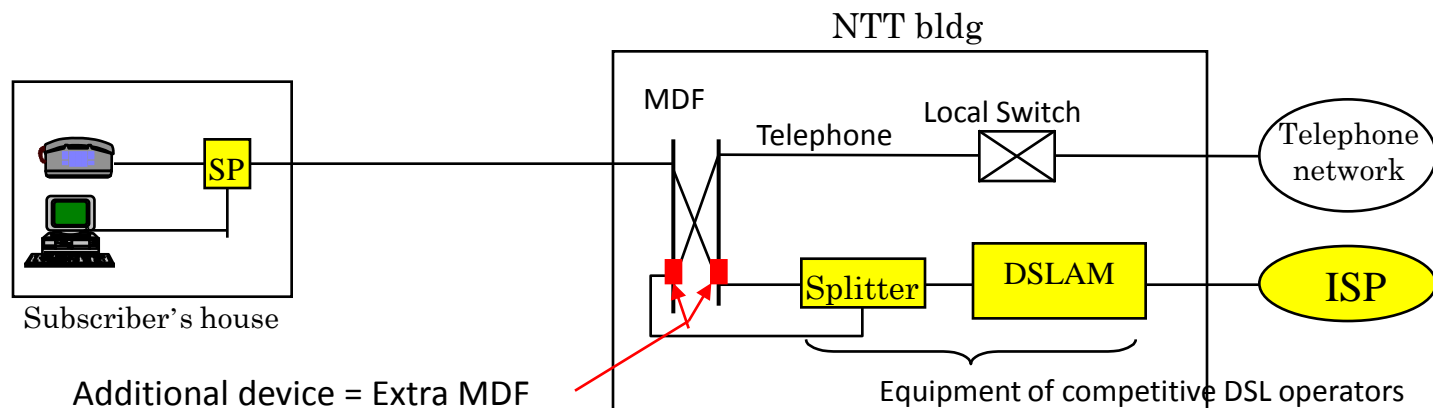
[Source] MIC research on March 31, 2008

Interconnection Charge for ADSL and FTTx

➤ ADSL

The interconnection charge for line sharing, approved by MIC, is only for additional device and line managing costs because the cost of local loop is already paid by users as a basic telephone charge.

[Interconnection charge for line sharing: less than 1 euro]



[Interconnection charge for dry copper: less than 10 euros]

➤ FTTx

The interconnection charge for FTTx service is for whole access line because the fiber access line is completely new and substitution for current metal access.

[Interconnection charge for dark fiber: approximately 35 euros for detached house]

Market Share of NTT East and West

Share by number of lines

Copper, Fiber & CATV lines

[March 2008]

91.0%

FTTH

[March 2008]

78.9%

Copper lines

[March 2008]

99.8%

Share by subscriber

ADSL

[September 2008]

36.3%

FTTH Service

[September 2008]

73.4%

OAB~J IP Telephone

[September 2008]

72.4%

WAN Service

[September 2008]

36.1%

**Fixed telephone
(including ISDN)**

[September 2008]

88.4%

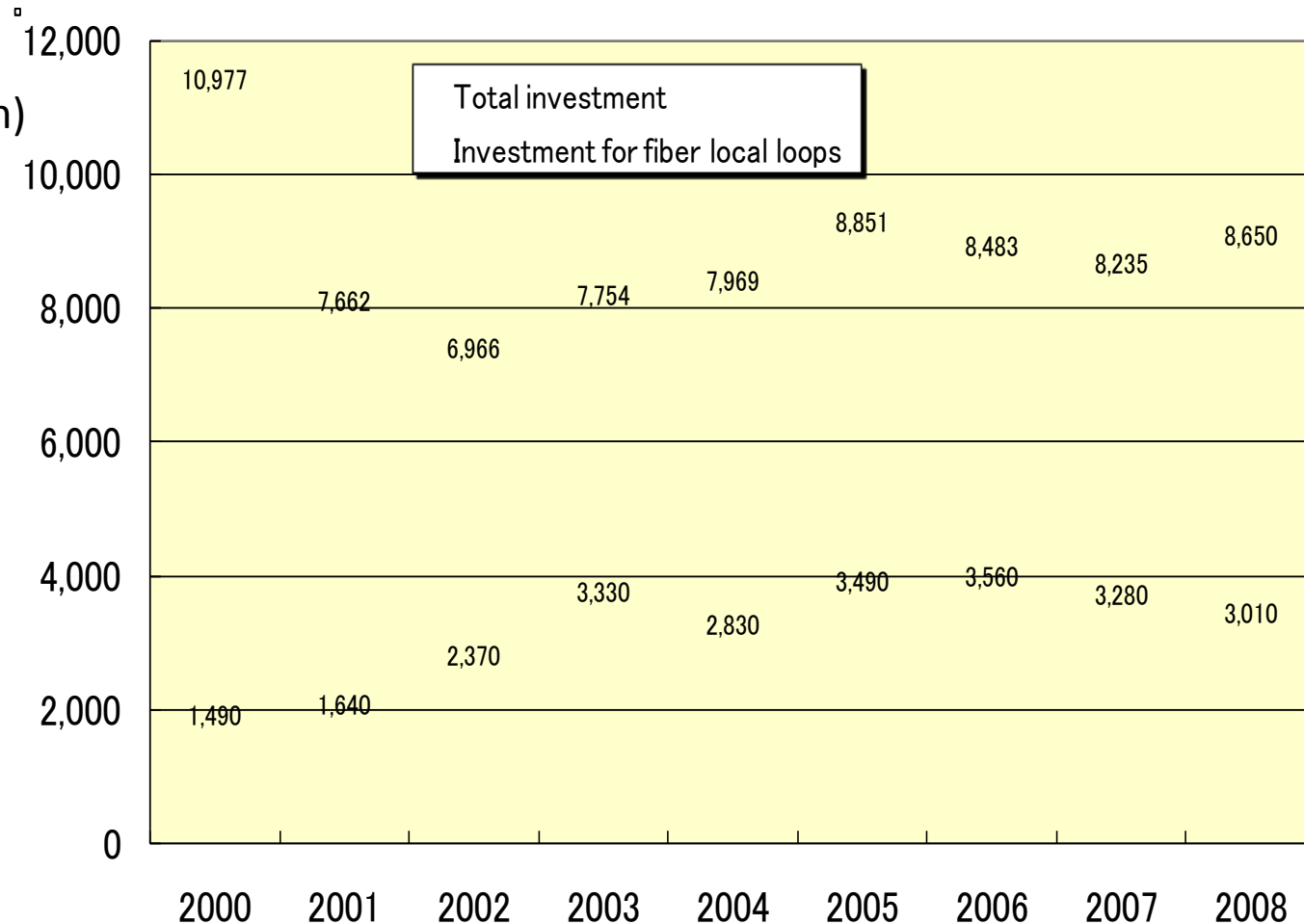
(Note) The figure for OAB~J IP telephone shows the percentage of numbers held by NTT East and West within the total IP telephony telecommunications numbers (OAB~J) assigned by MIC.

[Source] Compiled based on the numbers of lines and contracts in the reports submitted under the Rules for Reporting on Telecommunications Business

Fiber unbundling has not affected NTT's Investment in fiber so far

【Total investment and trend of investment for fiber local loop】

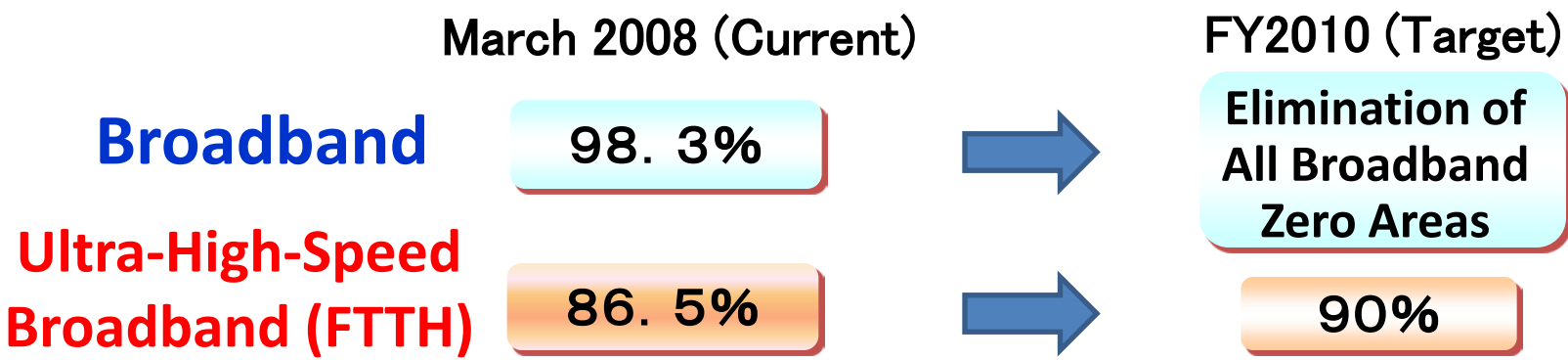
(unit:
hundred
million yen)



※The rate of coverage is the average of NTT East and West. The opticalization of access network means the ratio of opticalized feeder points of the all the feeder points.

Bridging the Digital Divide in Building Broadband Facilities

RATIO OF HOUSEHOLDS COVERED (ESTIMATION) (CURRENT AND TARGET)



PROMOTION SCHEME

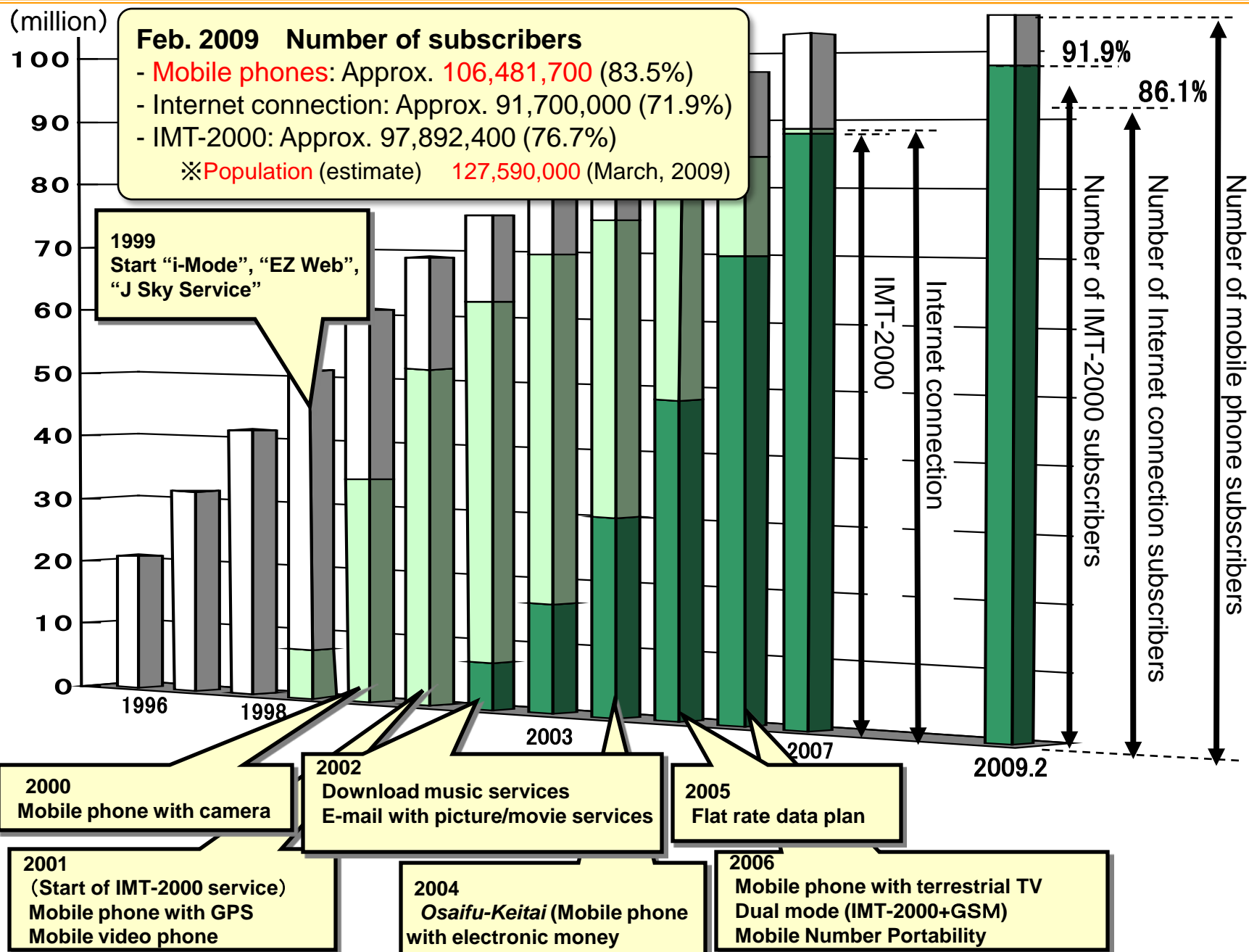
Expansion of the Local Information and Communications Infrastructure Development Grants (ICT Grants)

Draw Road Maps of Building Broadband Facilities

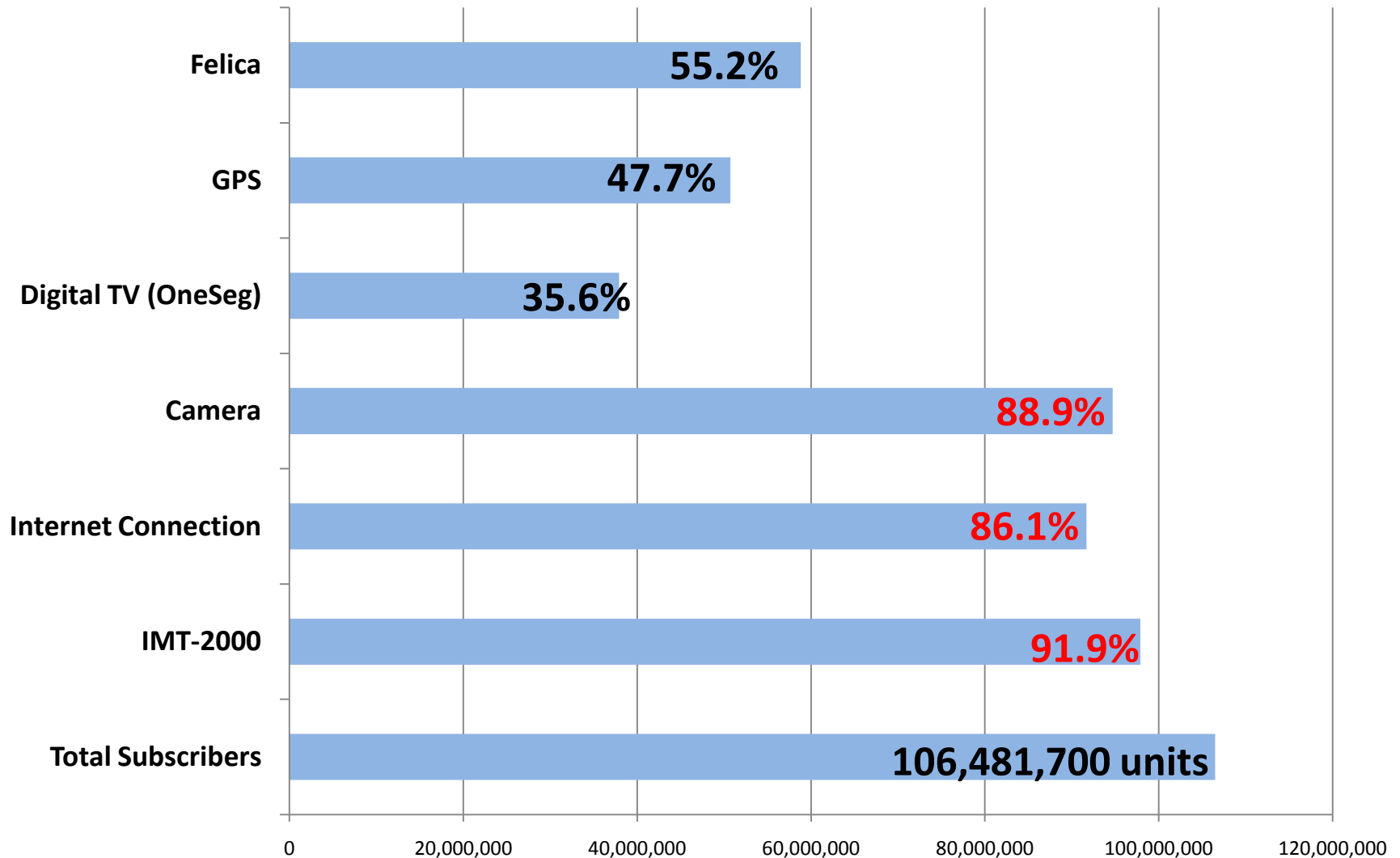
Improvement of the Use Environment of Satellite Broadband

Mobile Communications

Changes in the Mobile Phone Environment



Penetration of various applications with mobile phone



Evolution of Mobile Phone Applications

GAME



TV Telephone



Broadband
Communication

Digital TV
(1 Seg)



W-LAN

Bluetooth

Infrared

Wireless Media

GPS



Information Code



2D Barcode, Camera, High-resolution Display

Electronic Money
Credit Card



Season Ticket



Built-in RFID (Felica)

1. Mobile number portability
2. Promoting new entries of MVNOs
3. Improving interconnection regulations

- The fixed line broadband market saw FTTH surpassing DSL in their number of subscribers in June 2008.
- The mobile telephone market now exceeds 100 million subscribers with advanced handsets and is rapidly becoming a key infrastructure in business operations and everyday life in general. Also, Fixed-Mobile Convergence is expected to bloom in the near future.
- In response to these market changes in the last decade, the Japanese Government launched a comprehensive review of the interconnection policy for securing fair competition in the telecommunications market on February 24, 2009.

Interconnection Rules Responsive to Changes in the Telecom Market (2/2)

1. Outline of review items

I. Development of fair competition environment in the mobile communications market

1. Verification of current regulations
(Unbundling policy, optimal cost for tariff rates, etc.)
2. Effective network infrastructure use
(Facility sharing rules & roaming system establishment)



II. Development of fair competition environment in the fixed-line broadband market

1. FTTx services
2. DSL services
3. Effective network infrastructure uses



III. Development of fair competition environment to boost entry in telecom platform and content distribution markets

1. Opening up telecom platform functions
2. Strengthening dispute settlement function, etc.



IV. Policy on interconnection rules in the age of fixed-line and mobile communications integration

1. Issues in tariff rates calculation
2. Policy on future interconnection rules and underlying dominant carrier regulation)

2. Tentative Schedule

Feb. 2009: Consultation with the Information and Communications Council
July 2009: Invitation for comments on draft recommendations
Sep. 2009: Recommendations from the Council (tentative date)